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Performance effects of appointing other firms' executive directors to corporate boards: an analysis of UK firms

Charlie Weir,

Robert Gordon University, Garthdee Road, Aberdeen, AB10 7QE,
email c.weir@rgu.ac.uk

Oleksandr Talavera,

Durham University, Mill Hill Lane, UK DH1 3LB
email oleksandr.talavera@durham.ac.uk

Alexander Muravyev,

St. Petersburg University Graduate School of Management, Volkhovsky per. 3, St.
Petersburg 199004, Russia and

Institute for the Study of Labor (IZA), Schaumburg-Lippe Str 5-9, Bonn 53113,
Germany email muravyev@iza.org

Standard disclaimer applies. Corresponding author: Charlie Weir, Robert Gordon University, Garthdee Road, Aberdeen, AB10 7QE. Financial support for the project from the British Academy is gratefully acknowledged.

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Abstract

This paper studies the effect on company performance of appointing non-executive directors that are also executive directors in other firms. The analysis is based on a new panel dataset of UK companies over 2002-2008. Our results suggest a positive relationship between the presence of these non-executive directors and the accounting performance of the appointing companies. The effect is stronger if these directors are executive directors in firms that are performing well. We also find a positive effect where these non-executive directors are members of the audit committee. Overall, our results are broadly consistent with the view that non-executive directors that are executives in other firms contribute to both the monitoring and advisory functions of corporate boards.

JEL: G34, G39

Key words: executive directors, non-executive directors, company performance.

1 INTRODUCTION

The conflict of interest between managers on the one hand and providers of finance, most notably shareholders, on the other, is a key feature of the public corporation (Shleifer and Vishny 1997). Among various corporate governance mechanisms, which aim to realign these interests, a prominent role is assigned to corporate boards (Nordberg 2011). The issues of board structure and processes, defined in terms of board size, the establishment of various committees, the separation of the posts of the chairman of the board and the CEO, and non-executive director independence and representation have been central to recent corporate governance debates and reforms throughout the globe. The UK is no exception in this respect. Since the Cadbury Report (1992) there have been significant changes to board structures in the UK. For example, McKnight and Weir (2009) show that duality, combining the posts of the chairman and the CEO, is now rare in UK quoted companies and Dayha et al. (2002) report a significant increase in the percentage of non-executive directors classified as independent.

The importance afforded non-executive directors in national codes of corporate governance, including the UK Corporate Governance Code (2010), suggests that these directors should exert a positive influence on company performance. This relationship has received considerable attention in empirical studies, for example Agrawal and Knoeber (1996), Mura (2007) and Adams and Ferreira (2009) for the US and Faccio and Lasfer (2000) and Weir et al. (2002) for the UK. However, the results are mixed at best. As noted by Goergen (2012, p.282), “The existing empirical literature provides little support for the effectiveness of independent, non-executive directors”. One reason to that may be the lack of attention to the intrinsic

heterogeneity among independent directors, defined along various dimensions, including professional experience.

One important dimension is that some independent directors may also be executive directors in other companies (hereafter we will call these directors independent executive directors, IEDs). Indeed, a number of publicly quoted companies in the UK have boards that include non-executive directors that are simultaneously serving as executive directors on other boards.¹ This may have several implications for the performance of appointing firms. On the one hand, a company appointing IEDs may benefit from their knowledge and experience, especially if these IEDs hold executive positions in firms from the same or similar industry. On the other hand, according to agency theory, there is a potential conflict of roles when the same person acts as an executive director for one company but as a non-executive director for another. Therefore IEDs may be a source of agency conflicts when acting as executive directors but a source of reduced agency costs when acting as non-executive directors. The impact of IEDs on the performance of the company appointing them as non-executive directors is therefore a non-trivial and important question.

There is a very limited US literature that analyses the performance effects of having IEDs simultaneously sitting on different boards. Fich (2005) and Chen (2008) both report that IEDs have a positive effect on the appointing firm's performance which suggests that IEDs produce beneficial outcomes for the appointing firm. However, it

¹ An example is the Yule Catto report from 21 August 2007: "We are delighted to welcome Jez Maiden and Sandy Dobbie to the Yule Catto Board. They bring a wealth of business and chemical industry experience to our boardroom and we look forward to them playing an important part in the future development and strategic direction of the Group."¹ Importantly, at the time of this appointment Jez Maiden was also the chief finance officer of Northern Foods PLC.

is not clear that the findings from the US can be generalized to countries with different corporate governance systems, such as the UK.²

This paper studies performance effects of appointing other firms' executive directors to corporate boards in the UK. Consistent with the explicit advantages associated with non-executive directors, as set out in the various UK corporate governance codes, our basic hypothesis maintains that, in the presence of director fixed effects, the appointment of an executive director as non-executive director will have a positive impact on the appointing company's performance. Our empirical analysis is based on a new rich panel dataset that is obtained by merging financial data from Extel Financial and director information from the Corporate Register over the period 2002 to 2008.

We believe this paper makes several contributions to the corporate governance literature. First, to the best of our knowledge, this is the first UK study of the impact on performance of appointing an executive director as a non-executive director. It therefore contributes to the debate about the heterogeneity of non-executive directors and its potential consequences for firm performance.

Second, the corporate governance literature identifies two key roles of non-executive directors: monitoring the executive directors (Hermalin and Weisbach 2003), and providing advice to them (Coles et al. 2008 and Chen 2008). Although both roles are

²There are important differences between the governance systems of the US and UK. For example, US corporate governance is based on a system of mandatory disclosure which involves a combination of state and federal laws, including the Sarbanes Oxley Act (2002) and on the listing requirements of its various stock exchanges. In contrast, the UK's corporate governance system is based on a 'comply or explain' approach. This requires firms to inform shareholders about the governance recommendations with which they have complied and to explain why any non-compliance has occurred. In addition, as Higgs (2003) points out, the US system has adopted an approach that requires more transparency and accountability, mainly the responsibility of the CEO, as well as a more independent board structure, than found in the UK. The impact of appointing an executive director as a non-executive director in the US and UK may therefore have different outcomes given the differing corporate governance systems in the two countries.

highlighted in the UK corporate governance codes, there are no UK studies that differentiate between them in relation to their impacts on company performance. This paper attempts to fill in this gap and add new insights into the impact of these types of non-executive director.

Finally, in this paper we provide, by examining various interactions between the characteristics of the firms where IEDs hold executive and non-executive posts, a number of new insights into the importance of directors' human capital and its transferability across different industries.

Our results can be summarized as follows. First, appointing a non-executive director that is already an executive director in another quoted company has a significant and positive impact on the accounting performance of the firm. Second, the positive impact on the performance of the non-executive director's firm is stronger the better the performance of the firm where the person is an executive director. We interpret these results as evidence that the director's human capital creates positive advisory outcomes for the appointing firm. Third, we find a positive relationship between the performance of the company and the IEDs' membership in its audit committee. This suggests a contribution of independent executives to the monitoring function of corporate boards. Finally, the results for the degree of industry similarity between the firms where the directors hold their posts are ambiguous. Industry similarity seems to magnify the contribution of IEDs to company performance only when the IEDs are members of the audit committee.

The paper is organized as follows. Next section discusses the relevant literature and outlines the specific hypotheses to be tested. Section 3 sets out the data and the econometric modeling and Section 4 presents the data. The results are discussed in Section 5, and Section 6 draws some conclusions.

2 LITERATURE REVIEW

Agency theory argues that there are costs associated with the separation of ownership and control in publicly held companies. The agency model proposes that non-executive directors are an effective means of monitoring executive directors and that they are able to change the behaviour of the executive directors so that shareholder interests are pursued (Fama 1980; Fama and Jensen 1983; Hermalin and Weisbach 2003). In addition, providing executive directors with advice may be another important part of a non-executive director's functions (Adams and Ferreira 2007, Harris and Raviv 2008). Adams and Ferreira (2007) show that the effectiveness of non-executive directors at both monitoring and advising depends on the costs of gaining relevant information. There is also evidence that suggests the existence of a trade-off between the two roles. For example, Chen (2008) proposes that the cost of fulfilling the advisory function is a consequent reduction in monitoring effectiveness.

The relationship between non-executive director representation and firm performance is subject to controversy and debate (Goergen 2012). A number of studies have found a positive relationship between the percentage of non-executive directors and company performance, for example, Weir et al. (2002) and Mura (2007). In contrast, others have reported a negative relationship, for example Agrawal and Knoeber (1996) and Bhagat and Black (2002), Adams and Ferreira (2009) and Carter et al. (2010). Others have found an insignificant relationship, for example, Mehran (1995) and Faccio and Lasfer (2000). Hermalin and Weisbach (1991) argue that the lack of a clear relationship between board composition and performance is explained by factors such as top management exercising control over

the board selection process and by boards concentrating more on monitoring extreme negative events while ignoring marginal underperforming.

Further, Fich and Shivdasani (2006) find that firms with a majority of their outside directors serving on three or more boards have lower profitability. Thus busy non-executive directors may be over-committed and therefore unable to fulfil the role of effective monitors. In addition, Vafeas (2003) reports that longer outside director tenure adversely affects firm performance. Hwang and Kim (2009) find that the existence of substantial social ties between outside directors and top management diminishes the effectiveness of the monitoring role of non-executive directors.

The Higgs Report (2003) into the role and effectiveness of non-executive directors in the UK highlighted the narrowness of the pool from which UK non-executive directors have been drawn, including the relative lack of executive directors that were also acting as non-executive directors. The report states that only around 7.2% of non-executive directors also served as executive directors. This is a cause for concern because, as Higgs argues, appointing firms could benefit from the experience gained by their non-executive directors in the executive post. This assumes that information is not costly for the non-executive director to acquire and that the director's human capital is transferrable to the non-executive role.

The conjecture by Higgs (2003) that appointing non-executive directors who are executives in other firms may have positive performance effects has not, however, been tested in the UK. However, the limited US evidence suggests that IEDs indeed produce positive outcomes for the appointing firm. For example, Fich (2005) reports positive abnormal returns when the CEO of another firm is appointed as an independent director. Similarly, Chen (2008) finds a positive relationship between

independent directors that are also executive directors and firm performance. Our study provides an addition to this small but important literature based on new data from the UK.

3 EMPIRICAL MODELING

Our basic proposition is that firm performance is positively affected by the presence of a non-executive director that is also an executive director in another firm. This proposition can be substantiated as follows: undertaking the role of an executive director *ceteris paribus* implies the accumulation of managerial knowledge and skills that are likely be useful to the firm where the person works as non-executive director. These human capital characteristics can enhance both the monitoring and advisory functions of a corporate board and thus contribute positively to company performance. Therefore our first hypothesis is:

H1: IEDs have a positive impact on firm performance.

This basic hypothesis is set out in the first and simplest empirical model, in which we relate the performance of a company to the presence of independent executive directors on its board. In particular, we consider the following specification:

$$PERF_{it} = \beta IE_{it} + X_{it}\gamma + \delta_t + \xi_i + \varepsilon_{it} \quad (1)$$

where i is the firm index, t is the time index, and $PERF_{it}$ stands for the performance of company i , variable IE_{it} indicates the presence of a non-executive director that is also an executive director. Vector X_{it} contains a set of control variables which are traditionally included in studies of firm performance, δ_t is a time specific effect, ξ_i is a firm specific effect, which encompasses all unobserved time-invariant characteristics

of the firm potentially affecting its performance, and ε_{it} is a random disturbance. Of primary interest to us is the coefficient β on variable IE_{it} . In accordance with our basic hypothesis, we expect β to be positive.

We employ three different measures of performance: return on equity (ROE) which is defined as earnings before interest and tax (EBIT) divided by book value of shareholders' equity; return on sales (ROS), calculated as EBIT divided by total turnover; and Tobin's Q.³ The latter indicator is calculated as the ratio of the firm's market capitalization to book value of equity.⁴ We analyse the effect of IED using two definitions of variable IE_{it} . First, we employ a dummy variable which takes the value of 1 if at least one non-executive director is also an executive director of another company and 0 otherwise. Second, IE_{it} is defined as the number of non-executive directors on the board who are also executive directors at other companies.

The elements of vector X_{it} control for firm-specific characteristics that influence firm performance. The choice of our control variables is based on earlier studies of company performance in cross-sectional and panel data settings. To control for firm size, we include the natural log of the number of employees, $\log(Labour_{it})$ (Coles et al. 2008). The financial strength of a firm is measured by two variables, $Liquidity_{it}$, defined as the ratio of cash holdings to total assets, $Cash_{it}/TA_{it}$ (Baek et al. 2004), and $Leverage_{it}$, calculated as ratio of long term debt over total assets (Weir et al. 2002). In order to mitigate potential endogeneity problems, we lag all financial variables that appear on the right hand side of our regression models. Finally, to control for corporate governance characteristics we include in vector X_{it} the total

³In addition to ROE and ROS, we have also experimented with return on assets (ROA) and return on capital employed (ROCE). The results are similar.

⁴We have also experimented with another measure of Tobin' Q, calculated as book value of total assets minus book value of equity plus market capitalization divided by book value of the firm's assets. The estimation results turn out to be similar to those reported in the tables below.

number of executive and non-executive directors, *Board Size_{it}* (Yermack 1996), and the ratio of the number of non-executive directors to the total number of directors, *Share NE_{it}* (Mura 2007).⁵

We also investigate whether the effect of independent directors varies with the degree of industry similarity between the firms where these directors have their jobs. First, we consider the impact of appointing an independent executive director who is also an executive director in a firm that operates in the same industry. We argue that directors who work as executive directors in the same industry as that of the appointing firm will enhance the quality of advice offered to the appointing firm. This suggests that the human capital of these directors will be more beneficial than that of a director without such a detailed knowledge and understanding of the sector. However, the relationship may also be affected by competition considerations given that the two companies may be competitors. We define same industries based on two digit SIC classification.

The second industry effect analyzed in our paper takes account of the fact that the human capital of an independent executive can be proxied by the performance of the company where the non-executive director is employed as an executive director. One particular issue with relating director quality to firm performance is that the latter may be influenced by a variety of factors beyond managerial control, such as an overall economic downturn or industry shock. Firm performance is therefore a very noisy measure of director quality. This issue is addressed in the literature by using relative performance indicators, which compare the performance of a company to the performance of firms in the same industry or market (e.g., Parrino 1997, DeFond and

⁵We have also included lagged values of corporate governance measures as independent variables and received quantitatively similar results.

Park 1999, and Muravyev 2003). This is also the approach adopted in our study. We measure human capital, that is, the quality of an outside director, by the relative performance of the firm in which she is an executive director.

The baseline specification therefore becomes:

$$PERF_{it} = X_{it}\gamma + S_IND_{it}\phi + \theta PERF_B_{it} + \delta_t + \xi_i + \varepsilon_{it} \quad (2)$$

where variable S_IND_{it} is a vector of two variables $Same_IND_{it}$ and $NOT\ SAME_IND_{it}$. $Same_IND_{it}$ is a dummy variable which takes the value of 1 if at least one of the non-executive directors of firm i is an executive director of a company in the same industry and 0 otherwise. $NOT\ SAME_IND_{it}$ is a dummy variable which takes the value of 1 if a firm has at least one IE director, but she works in different industry and 0 otherwise. We define the relative performance of a firm ($PERF_B_{it}$) where the IED is an executive director as the difference between its reported performance and the median performance of all sampled firms belonging to the same industry and observed in the same year. This yields the following two hypotheses:

H2a: *IEDs recruited from the same industry in which the firm operates will have a positive effect on the firm's performance.*

H2b: *There is a positive relationship between the relative performance of the company where the director is an executive director and the performance of the firm where she is a non-executive director.*

Next we analyse the monitoring implications of an IED by investigating the impact on performance of having independent executive directors as members of the audit committee of the firm. The audit committee can be regarded as a proxy for the

monitoring function of independent directors because its main responsibilities include monitoring the quality of the financial statements published by the company, monitoring the effectiveness of the company's internal auditing function and reviewing the company's internal financial controls.

The econometric model transforms into:

$$PERF_{it} = \beta IE_{it} + X_{it}\gamma + S_IND_{it}\varphi + \theta PERF_B_{it} + AUDIT_{it}\psi + \delta_t + \xi_i + \varepsilon_{it}, \quad (3)$$

where audit committee membership, $AUDIT_{it}$ is defined as a dummy variable which takes the value of 1 if an IED sits in the audit committee and 0 otherwise. The hypothesis is:

H3: *Having an IED on the audit committee improves performance.*

Next, we focus on the interaction of industry similarity and average relative performance. Industry similarity is measured based on the SIC classifications. Industries are categorized into six groups. The first group contains mining industries (codes from 10 to 14) and chemical and allied products (code 28). The second group consists of the manufacturing sector with SIC codes between 20 and 28. The remaining manufacturing firms (codes 32 to 37) constitute the third group. The fourth category contains retail trade services as well as transportation (codes 40 to 59). The fifth group consists of financial services, codes 60 to 67. The remaining companies (codes 70 and above) are placed in the sixth group. This produces a third S_IND dummy which takes the value of 1 if an IED is also an executive director in a company operating in a similar industry and 0 if not. The model therefore becomes:

$$PERF_{it} = \beta IE_{it} + X_{it}\gamma + S_IND_{it}\varphi + \theta PERF_B_{it} + AUDIT \times S_IND_{it}\psi + PERF_B \times S_IND_{it}\nu + \delta_t + \xi_i + \varepsilon_{it} \quad (4)$$

The availability of industry specific human capital and the amount of human capital should have positive effects on the company's performance, in particular through the quality of advice provided. We therefore test the following hypothesis:

H4: *The impact of an independent executive director on performance will be positive if the director comes from a firm belonging to the same or similar industry.*

In relation to the interaction of industry similarity and the relative performance of a firm where the director is an executive director, we hypothesise a positive relationship given the existence of transferrable human capital.

H5: *The impact of an independent executive director on performance will be magnified if the director comes from a well-performing firm belonging to a similar industry.*

Finally, the reduction of agency problems depends crucially on the quality of monitoring mechanism. We aim to measure the latter by the interaction of industry characteristics (same or similar industries) and audit committee membership. Thus, we hypothesise:

H6: *The impact of an independent executive director on performance will be positive if the director is a member of Audit Committee and she comes from a firm belonging to the same or similar industry.*

4 DATA DESCRIPTION

The data for this study have been collected from two major sources. First, financial data are drawn from the Extel Financial database. The advantage of the database is

its use of consistent financial report information across a large number of industries. Our initial sample contains about 5,000 UK listed companies observed between 2002 and 2008. Second, information about executive and non-executive directors has been hand collected from the Corporate Register. Overall, there are about 130,000 director-years during the seven years considered. The databases have been merged based on company name. While both database providers claim that they cover the population of listed companies, only about 50 percent of observations that are present in both the firm-level and director-level datasets. Our initial sample links around 68,000 directors with financial information of companies.

The sample was constructed in the following way. First, we dropped all company-years that do not report either executive or non-executive boards. Second, we removed all firms that report either negative equity or negative total assets. At this point the data consisted of about 57,000 director-company-year observations pertaining to 8,506 firm-years. Third, to address the issue of firms in severe financial distress, we have dropped companies that report ROE or ROS less than -1. Fourth, to reduce the effect of outliers we dropped 1% observations from the left and right tails of the distribution of performance and relative performance.⁶ Fifth, we require companies to have at least one executive and at least one non-executive director. Finally, given that we intend to make use of some lagged values in our regression specification, we require at least two years worth of data. The final estimation data set consists of about 4,020 firm-years.

INSERT TABLE1

⁶We have also tried winsorizing performance variables as well as applying different cut-off points for outliers (2% and 5% instead of 1%). In all these cases we obtained similar results.

Table 1 presents an overview of the variables. Among the sampled firms, the average board has about 6.5 directors and the average share of non-executive directors is 52%. This is similar to what was reported in previous studies, such as Weir and Laing (2003) and Guest (2008). Table 1 also shows that 21% of the sampled firms have non-executive directors that are also executive directors in other firms. On average 6% of non-executive directors are also executive directors in other companies, a finding consistent with Higgs (2003). This, and the other board structure statistics, suggests that there is no systematic selection bias in our sample.

The performance measures of the companies from which the non-executive directors come are above average showing that they are good performers. For example the companies have, on average, two percentage points superior performance in terms of ROE and one percentage point superiority in terms of ROS. They also have higher Tobin's Q ratios, by 18 percentage points. The average (median) firm holds 21% (19%) of their total assets as long term debt. *Cash to total assets* represents the total of all cash, deposits and notes and bills in the structure of total assets. Our data reveal that average (median) firms maintain 10% (6%) of their assets in terms of cash. As expected, all firms report positive average performance during the time period examined.

In relation to audit committee membership, we find that 10% of the firms have a non-executive director who is also an executive director as a member. Although not reported in the table, two percent of the firms have on their audit committees a non-executive director who is an executive director of a firm in the same industry. We also find that four percent of the sampled firms have someone on the audit committee who is an executive director in a similar industry.

Table 2 shows descriptive statistics for two subsamples: firms that have IEDs and those that do not. We find significant differences between the characteristics of the two types of firm. For example, firms with non-executive directors that are also executive directors in other firms use, on average, significantly more debt (24% relative to 20%). In terms of employment, we find that firms with non-executive directors are significantly bigger. They have larger boards with, on average, 8.37 members as compared with 6.96 members in the other firms. They also have a significantly larger percentage of non-executive directors on the board, 57% as opposed to 51%. In terms of performance, ROE and ROS all show that firms that employ non-executive directors that are also executive directors are more profitable. For example, ROE is 16% for firms with IEDs and 9% for firms without IEDs. They also have significantly higher values of Tobin's Q. However, there is no difference in liquidity ratios.

INSERT TABLE2

5 RESULTS DISCUSSION

5. 1 Baseline specifications

The results in Table 3 show the impact of appointing an executive director as a non-executive director on the appointing firm's performance, as measured by ROE, ROS, and Tobin's Q. Columns (1) - (3) show the results for the first IED measure, the dummy variable that takes the value of 1 if a firm has a non-executive director who is also an executive director and 0 otherwise. Columns (4) - (6) report the estimates

when the IED variable measures the number of non-executive directors that are also executive directors. The results are obtained using the fixed effects estimator.

Both ROE and ROS models show a positive and significant relationship between firm performance and the non-executive director affiliation measures. For example, firms with IEDs are likely to have one and a half standard deviations higher ROE compared to firms without IEDs. We also find a positive and significant relationship between the number of IEDs and performance. However, the Tobin's Q regressions reveal positive but statistically insignificant effects.

INSERT TABLE3

5.2 Augmented specifications

Table 4 develops the analysis by evaluating how the effect of IEDs varies with the degree of industry similarity between the firms in which IEDs have jobs. The results in Column (1) provide evidence, at the 5% level, that having any non-executive directors who are also executive directors has a positive effect on the appointing firm's ROE even if this director is not from the same industry. The relationship is also significant if the director is from the same industry. These results suggest that the positive performance effects of IEDs stem from their general skills rather than from industry-specific skills.

Columns (1) - (3) also contain measures of industry-relative performance of the company where the non-executive director is an executive director. Each specification includes a relative performance measure which matches the dependent

variable. For example, since ROE is the dependent variable in Column (1), the relative performance measure is also based on ROE.⁷

We find a positive and significant relationship between the ROE of the appointing firm and the relative performance of the executive director's ROE. In terms of magnitude, a two standard deviations increase in the relative ROE of the company where director holds an executive position increases ROE of the appointing company by 0.035. This is a very substantial increase given that the average (median) ROE is 0.10 (0.12). We interpret this result as evidence that the appointing firm gains some of the director's human capital in the form of better quality advice. Thus the advantage of being responsible for effective strategies and policies as an executive director produces benefits in the role of non-executive director. Similar evidence is found in Column (2) with ROS as the dependent variable. The result is consistent with Chen (2008) which finds a positive relationship between a non-executive director's advisory function and firm performance. These results can also be consistent with the findings in Kaplan and Reishus (1990) and Fich (2005) suggesting that executives in companies that perform well are more likely to be appointed non-executive directors in other companies.

The agency model emphasizes the monitoring role of non-executive directors. Chen (2008) argues that, by concentrating on the advisory role, monitoring will suffer and firms will incur agency costs. We test the monitoring role by means of membership of the audit committee. The responsibilities of the audit committee and its members have been set out in various UK reports, for example The Combined Code on Corporate Governance (2003) and The UK Corporate Governance Code (2010).

⁷ If a company has an IED that sits on several boards as a non-executive director, the average relative performance measure for all of the relevant companies is calculated.

Audit committee members have a specific set of roles and responsibilities including monitoring the integrity of the company's financial statements, monitoring the effectiveness of the internal auditing systems, reviewing the company's internal financial controls and to ensure that possible financial problems are raised. These responsibilities should therefore result in better financial decision-making and better financial performance.

The recommendation that audit committees should consist of at least three independent non-executive directors indicates that they are expected to undertake effective monitoring of the executive directors. Given the reputational issues involved, it is reasonable to argue that non-executive directors that are also executive directors will be particularly strong monitors of the board's actions if a member of the audit committee.

Columns (4) - (6) of Table 4 report the results for audit committee membership. In particular, Columns (4) - (5) show that having IEDs on the audit committee has no effect on accounting performance as measured by ROE or ROS. Column (6) shows that having IEDs on the audit committee has a positive effect on market performance, measured by Tobin's Q. This is an important result because it shows that, within the UK context, IEDs produce positive returns on both the advisory and monitoring functions. The monitoring result is contrary to that of Chen (2008). The Chen result is based on the policies pursued by the companies where the director is a non-executive. However, it is argued here that the analysis of the audit committee membership offers a more appropriate insight into the monitoring role of an IED because it deals with the crucial issue of internal financial control.

INSERT TABLE 4

We develop the analysis by investigating the interactions of industry similarities and the relative performance of the company where the IED is an executive director. We also analyse the interactions of industry similarities and the audit committee membership of IEDs. $RELATIVE\ PERFxNOT\ SAME$ is the interaction of the industry adjusted profitability of the company where the IE is an executive director and the dummy variable NOT_SAME which takes the value of 1 if the IE director comes from not the same industry and 0 otherwise. $RELATIVE\ PERFxNOT\ SAME/NOT\ SIMILAR$ is the interaction of the industry adjusted profitability of the company where the IE is an executive director and the dummy variable $NOT_SIMILAR$ which has the value of 1 if the IE director comes from neither the same, nor similar, industry and 0 otherwise. $RELATIVE\ PERFx\ SIMILAR$ is the interaction of the industry adjusted profitability of the company where the IE is an executive director and the dummy variable $SIMILAR$ which takes the value of 1 if the IE director comes from the same industry and 0 otherwise. $RELATIVE\ PERFx\ SAME$ is the interaction of the industry adjusted profitability of the company where the IE is an executive director and dummy variable $SAME$ which has the value of 1 if the IE director comes from a similar industry and 0 otherwise.

In relation to audit committee membership and industry similarity, $AUDITxNOT\ SAME$ is defined as a dummy variable which equals 1 if there are audit committee members that are executive directors in other companies but none work for a company in a similar industry and 0 otherwise. $AUDITxNOT\ SAME/NOT\ SIMILAR$ has the value of 1 if there are audit committee non-executive directors who are executive directors in other companies, but none of them work in a company from the same industry or a similar group of industries and 0 otherwise. $AUDITxSIMILAR$ has the value of 1 if a company has an audit committee non-executive director who

is also an executive director in a similar industry or 0 otherwise. $AUDITxSAME$ equals 1 if a company has a non-executive director who is an executive director in a company in the same industry and 0 otherwise.

Table 5 reports the results for the regressions with these interaction terms. Columns (1) - (2) reveal that the interaction of the higher the relative performance of the firm on which the non-executive sits as an executive director and that director not being from the same industry will lead to better accounting performance (ROE and ROS). However, as column (3) shows, it does not affect Tobin's Q ratio. We find an insignificant result for the same industry measure for all three performance measures. This means that appointing a non-executive director who is an executive director for another company in the same industry does not improve performance. This may be explained by competition issues given that executive directors that sit on the boards of competitors are in a difficult position in relation to the advice they give. Therefore they have a conflict between their reputational interests and their concerns about offering a competitor some advantage. The insignificant relationship, however, does indicate that the IEDs do not offer poor advice.

In relation to monitoring, we find no evidence that IEDs increase agency costs and hence damage performance. In terms of audit committee membership impacts, Table 5 shows that having independent non-executive directors from the same industry on the audit committee raises Tobin's Q but does not affect either ROE or ROS. These results suggest that the market regards appointing a non-executive director who is an executive director in the same industry as positive but that the benefit is not reflected in better accounting performance.

Columns (4) - (6) of Table 5 report the results for industry similarity interactions. The estimates show no significant effect for relative performance when non-executive directors are appointed from the same industry. This may be explained by competition effects, since the best executive directors are unlikely to provide valuable advice to competitors. Column (4) shows the interaction of industry similarity and higher relative profitability of the company where the IED is an executive director significantly improves the performance of the company where the director is an IED. Column (5) reports a positive relationship between ROS and a non-executive director working in a different industry. We also find a positive relationship between Q and the director being on the audit committee and being from the same industry. This shows effective monitoring and suggests that the market values that specific governance mechanism because it does not create a conflict of interests with the company where the IED is employed as an executive director given that no policies are involved. The appointing company will therefore benefit from the IED's broader expertise and human capital.

INSERT TABLE 5

5.3 Dynamic panel data approach

Our models (1) – (4) are estimated using a fixed effect estimator which might not properly address issues of endogeneity in relation to board appointments and performance, Drakos and Bekiris (2010). For example, as specified, IEDs positively affect the appointing firm's performance. However, it may be the case that high performing companies attract better IEDs. We address this by amending our baseline model (1) with a lagged dependent variable which allows us to control for

the potential impact of performance persistence. Our dynamic model takes the following form:

$$PERF_{it} = \lambda PERF_{i,t-1} + \beta IE_{it} + X_{it}\gamma + \delta_t + \xi_i + \varepsilon_{it} \quad (5)$$

To estimate equation (5) we have to take into account the potential endogeneity of financial performance and board appointment decisions. Furthermore, including the lagged dependent variable as an independent variable makes the fixed effects estimator not only biased, but also inconsistent. To overcome this problem an instrumental variables (IV) estimator could be used. However, appropriate governance instruments are not easy to find. We therefore make use of the dynamic panel data (DPD) estimator which employs a matrix of lagged endogenous variables as instruments timed from t-2 to t-6. The DPD technique therefore creates instruments by its construction. All our models are estimated with the two-step GMM System (DPD) estimator, which combines equations in differences of the variables (instrumented by lagged levels) with equations in levels of the variables (instrumented by lagged differences). In addition, year dummy variables are included in the regressions as exogenous.

The reliability of the DPD results depends crucially on the assumption that the instruments are valid. This can be checked by employing the Hansen test of overidentifying restrictions. A rejection of the null hypothesis that instruments are uncorrelated to errors would indicate inconsistent estimates. In addition, we also present test statistics for second-order serial correlation in the error process. In a dynamic panel data context, we expect first order serial correlation, but should not be able to detect second-order serial correlation if the instruments are orthogonal to the errors.

Table 6 reports GMM-SYS dynamic panel data results. The results are comparable to fixed effects estimates reported in Table 1. We find that IEDs have a positive effect on the appointing firm's performance and, in particular, the greater the number of IEDs, the better the appointing firm's performance. These results apply to all performance measures. All our model specifications pass the test for the second-order autocorrelation as well as the Hansen test of the validity of the instruments.

INSERT TABLE 6.

6 CONCLUSIONS

This paper has explored the impact of appointing executive directors as non-executive directors on the appointing firm's performance. We find that relatively few executive directors are appointed as non-executive directors in UK quoted firms, which is consistent with the Higgs Report (2003). This is despite the long-standing conjecture that such appointments may positively affect firm performance. Consistent with this view, our results suggest a positive link between the presence of an IED and the appointing firm's performance. Our data reveal that the better the relative performance of the firm where the director is an executive, the better the appointing firm's performance. This latter result suggests that directors' human capital matters, most likely, for the quality of advice offered by them.

We further find some evidence that membership in the audit committee has a positive effect on performance. This result is consistent with a non-trivial contribution of IEDs to the monitoring function of corporate boards. Overall, our findings are consistent with the view that the appointing firm benefits from both the advisory and

monitoring functions of a non-executive director and suggest that appointing executive directors as non-executive director generates benefits for shareholders. The low incidence of IEDs highlighted by Higgs (2003) is therefore something that should be addressed given their positive effect on the performance of the appointing firms.

The analysis has identified a number of areas for further research. First, the lack of a positive relationship between performance and appointing from the same industry may provide additional insights into the potential tension between advice and possible competition effects. Second, the distinction between types of non-executive directors, those already executive directors and those not, may provide a better understanding of the monitoring and advisory roles of non-executive directors. Third, the impact of social capital and its interaction with human capital may offer additional insights into explaining firm performance.

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Table 1: Sample descriptive statistics.

Variable	Mean	Sd	Median	N
Leverage	0.21	0.16	0.19	3,836
Liquidity	0.10	0.11	0.06	3,836
Size	6.53	2.05	6.44	4,008
Board Size	7.25	2.67	7.00	4,020
Share NE	0.52	0.14	0.50	4,020
IE presence	0.21	0.41	0.00	4,020
Share of IE directors	0.06	0.14	0.00	4,020
Number of IE directors	0.24	0.51	0.00	4,020
ROE	0.10	0.27	0.12	3,987
ROS	0.04	0.15	0.05	3,565
Tobin's Q	0.85	0.70	0.65	3,971
Average Relative ROE of Exec Companies	0.02	0.31	0.00	3,997
Average Relative ROS of Exec Companies	0.01	0.06	0.00	3,910
Average Relative Tobin's Q of Exec Companies	0.18	0.51	0.00	3,993
Audit	0.10	0.30	0.00	4,020

Leverage is the ratio of long term debt to total assets. *Liquidity* is liquid assets divided by total assets. *Size* is the natural log of number of employees. *Board size* is the total number of directors on the board. *Share NE* is the percentage of non-executive directors on the board. *IE Presence* is a dummy variable which has the value of 1 if a non-executive director is also an executive director of another company and 0 if not. *Share of IE directors* is the ratio of non-executive directors on the board that are also executive directors of other firms to total number of non-executive directors. *Number of IE directors* is the number of non-executive directors on a board who are executive directors in other companies. The return on equity, *ROE*, is defined as EBIT divided by book value of shareholders' equity. *Tobin's Q* is the market value of firm divided by book value of the firm's assets.. *Average Relative ROE of Exec Companies* is the average profitability of the firms where the non-executive director is employed as an executive director. *Average Relative ROS of Exec Companies* is the average profitability of the firms where the non-executive director is employed as an executive director. *Average Relative Tobin'sQ of Exec Companies* is the average Q ratio of the firms where the non-executive director is employed as an executive director. *AUDIT* as a dummy variable which takes the value of 1 if an IE director sits in the audit committee and 0 otherwise.

Table 2: Univariate analysis of company characteristics of firms that have appointed executive directors as non-executive directors and firms that do not.

Variable	No IE			Yes IE			Diff
	Mean	Sd	N	Mean	Sd	N	
Leverage	0.20	0.16	3,030	0.24	0.16	806	-0.04***
Liquidity	0.10	0.12	3,039	0.10	0.11	797	0.00
Size	6.31	1.99	3,178	7.38	2.04	830	-1.07***
Board Size	6.96	2.58	3,186	8.37	2.71	834	-1.40 ***
Share NE	0.51	0.14	3,186	0.57	0.13	834	-0.06 ***
ROE	0.09	0.27	3,162	0.16	0.26	825	-0.07***
ROS	0.03	0.16	2,818	0.06	0.13	747	-0.03***
Tobin's Q	0.84	0.69	3,153	0.89	0.72	818	-0.05**

***, ** significant at 1% and 5%, respectively.

Leverage is the ratio of long term debt to total assets. *Liquidity* is liquid assets divided by total assets. *Size* is the natural log of number of employees. *Board size* is the total number of directors on the board. *Share NE* is the percentage of non-executive directors on the board. The return on equity, *ROE*, is defined as EBIT divided by book value of shareholders' equity. *Tobin's Q* is the market value of firm divided by book value of the firm's assets.

Table 3: Fixed Effects Regression Results for the basic specification about the impact of non-executive directors that are also executive directors.

Dependent Variable:						
	ROE	ROS	Tobins Q	ROE	ROS	Tobins Q
	(1)	(2)	(3)	(4)	(5)	(6)
Board Size	0.006** (0.003)	0.002 (0.002)	0.001 (0.006)	0.006** (0.003)	0.002 (0.002)	0.001 (0.006)
Share NE	-0.039 (0.061)	0.001 (0.037)	0.004 (0.110)	-0.038 (0.062)	-0.000 (0.037)	0.004 (0.110)
Lagged Leverage	-0.043 (0.065)	-0.079*** (0.030)	-0.537*** (0.135)	-0.041 (0.065)	-0.078*** (0.030)	-0.537*** (0.135)
Lagged Size	-0.041*** (0.013)	-0.015 (0.010)	-0.126*** (0.026)	-0.041*** (0.013)	-0.015 (0.010)	-0.126*** (0.026)
IED Presence	0.041*** (0.014)	0.010* (0.006)	0.006 (0.026)			
Number of IEDs				0.025** (0.011)	0.009* (0.005)	0.005 (0.020)
Firm-years	4,002	3,582	3,994	4,002	3,582	3,994
Firms	1,219	1,088	1,221	1,219	1,088	1,221
R ²	0.07	0.03	0.24	0.07	0.03	0.24

Robust standard errors in parentheses. Constant and time dummy variables are included in regressions but not reported.

* significant at 10%, ** significant at 5%, *** significant at 1%.

ROE, is defined as EBIT divided by book value of shareholders' equity. *ROS*, is defined as total turnover divided by book value of shareholders' equity. *Tobin's Q* is the market value of firm divided by book value of the firm's assets. *Board size* is the total number of directors on the board. *Share NE* is the percentage of non-executive directors on the board. *Lagged Leverage* is the ratio of long term debt to total assets lagged one year. *Lagged Size* is the natural log of number of employees lagged one year. *IED Presence* is a dummy variable which has the value of 1 if a non-executive director is also an executive director of another company and 0 if not. *Number of IEDs* is the number of non-executive directors on a board who are executive directors in other companies.

Table 4: Fixed Effects Regression Results: Specifications with relative performance, audit committee membership and industry similarities.

	Dependent Variable					
	ROE	ROS	Tobins Q	ROE	ROS	Tobins Q
	(1)	(2)	(3)	(4)	(5)	(6)
Board Size	0.006** (0.003)	0.002 (0.002)	0.001 (0.006)	0.006** (0.003)	0.002 (0.002)	0.002 (0.006)
Share NE	-0.047 (0.061)	0.001 (0.038)	-0.019 (0.109)	-0.044 (0.062)	0.002 (0.039)	-0.036 (0.110)
Lagged Leverage	-0.048 (0.065)	-0.082*** (0.030)	-0.536*** (0.134)	-0.053 (0.065)	-0.085*** (0.031)	-0.555*** (0.135)
Lagged Size	-0.041*** (0.012)	-0.014 (0.026)	-0.124*** (0.013)	-0.040*** (0.013)	-0.014 (0.010)	-0.127*** (0.026)
IED X not same	0.032** (0.016)	0.000 (0.008)	-0.026 (0.040)	0.030 (0.019)	-0.000 (0.010)	-0.056 (0.038)
IED X same	0.054* (0.032)	0.022 (0.016)	0.017 (0.064)	0.049 (0.034)	0.021 (0.017)	-0.016 (0.066)
RelPerf	0.035*** (0.011)	0.116*** (0.043)	0.024 (0.032)	0.051* (0.030)	0.112** (0.048)	0.022 (0.027)
AuditxIED				-0.003 (0.020)	0.002 (0.009)	0.073* (0.040)
Firm-years	3,980	3,502	3,967	3,980	3,502	3,967
Firms	1,219	1,072	1,221	1,219	1,072	1,221
R ²	0.07	0.03	0.24	0.07	0.03	0.25

Robust standard errors in parentheses. Constant and time dummy variables are included in the regressions but not reported.

* significant at 10% ** significant at 5%, *** significant at 1%.

ROE, is defined as EBIT divided by book value of shareholders' equity. *ROS*, is defined as total turnover divided by book value of shareholders' equity. *Tobin's Q* is the market value of firm divided by book value of the firm's assets. *Board size* is the total number of directors on the board. *Share NE* is the percentage of non-executive directors on the board. *Lagged Leverage* is the ratio of long term debt to total assets lagged one year. *Lagged Size* is the natural log of number of employees lagged one year. *IE Presence* is a dummy variable which has the value of 1 if a non-executive director is also an executive director of another company and 0 if not. *Number of IE directors* is the number of non-executive directors on a board who are executive directors in other companies. *IED X NOT SAME* is a dummy variable equals 1 if a firm has at least one IED who works in different industry and 0 otherwise. *IED X SAME* is a dummy variable which takes the value of 1 if at least one of non-executive directors of firm *i* has an executive position in the same industry and 0 if not. *RelPerf_i* is the average performance of the companies in which the non-executive director acts as an executive director. *Audit X IE* is a dummy variable which takes the value of 1 if there is an IED on the audit committee and 0 if not

Table 5: Fixed Effects Regression Results: Specifications with relative performance, industry similarities and IE interactions

	Dependent Variable					
	ROE	ROS	Tobins Q	ROE	ROS	Tobins Q
	(1)	(2)	(3)	(4)	(5)	(6)
IE Not Same Industry	0.033*	0.001	-0.017			
	(0.018)	(0.009)	(0.037)			
IE Not Same/Not Similar				0.040**	-0.000	-0.019
				(0.020)	(0.010)	(0.040)
IE Similar Industry				-0.004	0.002	0.027
				(0.026)	(0.016)	(0.075)
IE Same Industry	0.053	0.011	-0.131	0.051	0.011	-0.128
	(0.039)	(0.015)	(0.099)	(0.038)	(0.015)	(0.099)
Relative Perf X Not Same	0.041***	0.151***	0.005			
	(0.011)	(0.053)	(0.032)			
Relative Perf X Not Same/Not Similar				0.032	0.145**	0.010
				(0.024)	(0.059)	(0.036)
Relative Perf X Similar				0.047***	0.158	-0.012
				(0.005)	(0.109)	(0.062)
Relative Perf X Same	0.015	-0.027	0.102	0.015	-0.028	0.101
	(0.011)	(0.081)	(0.095)	(0.011)	(0.080)	(0.095)
Audit X Not Same Industry	-0.006	-0.005	0.021			
	(0.021)	(0.010)	(0.047)			
Audit X Not Same/Not Similar				-0.010	-0.005	0.003
				(0.023)	(0.011)	(0.054)
Audit X Similar Industry				0.051	0.011	0.008
				(0.036)	(0.013)	(0.053)
Audit X Same Industry	0.005	0.028	0.166**	0.001	0.027	0.160**
	(0.040)	(0.022)	(0.071)	(0.039)	(0.022)	(0.071)
Firm-years	3,980	3,502	3,967	3,980	3,502	3,967
Firms	1,219	1,072	1,221	1,219	1,072	1,221
R2	0.07	0.03	0.24	0.07	0.03	0.24

Robust standard errors are in parentheses. Constant and time dummy, board size, share of non-executive directors, lagged leverage and lagged SIZE variables are included in specification but not reported. * significant at 10% ** significant at 5%, *** significant at 1%.

ROE, is defined as EBIT divided by book value of shareholders' equity. ROS, is defined as total turnover divided by book value of shareholders' equity. Tobin's Q is the market value of firm divided by book value of the firm's assets. IE NOT SAME INDUSTRY takes the value of 1 if the IE director is not an executive director in the same industry and 0 otherwise. IE NOT SAME/NOT SIMILAR is 1 if the IE director is not an executive director in the same or similar industry and 0 otherwise. IE SIMILAR is 1 if the IE director is an executive director in a company in a similar industry and 0 otherwise. IESAME is 1 if the IE director is also an executive director in a company in the same industry and 0 otherwise. RELATIVE PERFxNOT SAME is the interaction of the industry adjusted profitability of the company where the IE is an executive director and the IE director coming from not the same industry and 0 otherwise. RELATIVE PERFxNOT SAME/NOT SIMILAR is the interaction of the industry adjusted profitability of the company where the IE is an executive director and the IE director coming from neither the same nor similar industry, and 0 otherwise. RELATIVE PERFx SIMILAR is the interaction of the industry adjusted profitability of the company where the IE is an executive director and the IE director coming from the same industry and 0 otherwise. RELATIVE PERFx SAME is the interaction of the industry adjusted profitability of the company where the IE is an executive director and the IE director coming from a similar industry and 0 otherwise. AUDITxNOT SAME is a dummy variable which equals 1 if there

are audit committee members that are executive directors in other companies but none work for a company in a similar industry and 0 otherwise. AUDITxNOT SAME/NOT SIMILAR has the value of 1 if there are audit committee non-executive directors who are executive in other companies, but none of them work in a company from the same industry or a similar group of industries and 0 otherwise. AUDITxSIMILAR has the value of 1 if a company has an audit committee non-executive director who is also an executive director in a similar industry or 0 otherwise. AUDITxSAME, is 1 if a company has a non-executive director who is an executive director in a company in the same industry and 0 otherwise.

Table 6: GMM-SYS Dynamic Panel Data Regressions Results.

	Dependent Variable					
	ROE	ROS	Tobin's Q	ROE	ROS	Tobin's Q
	(1)	(2)	(3)	(4)	(5)	(6)
IE presence	0.060** (0.029)	0.051*** (0.019)	0.186*** (0.071)			
Number of IE directors				0.041* (0.024)	0.043** (0.017)	0.144** (0.061)
Boardsize	0.006 (0.008)	0.000 (0.007)	0.014** (0.006)	0.005 (0.008)	0.001 (0.008)	0.014** (0.006)
Share NE	0.041 (0.107)	0.011 (0.094)	0.284 (0.324)	0.059 (0.109)	0.019 (0.096)	0.326 (0.329)
Leverage	-0.359*** (0.137)	-0.134 (0.097)	-0.216 (0.384)	-0.343** (0.136)	-0.125 (0.099)	-0.259 (0.385)
Log(Labour)	0.030* (0.016)	0.013 (0.018)	-0.131** (0.053)	0.033** (0.016)	0.011 (0.019)	-0.134** (0.055)
Lagged performance	0.330*** (0.080)	0.282* (0.167)	0.276*** (0.103)	0.327*** (0.081)	0.296* (0.164)	0.284*** (0.105)
Firm-years	3,968	3,549	3,956	3,968	3,549	3,956
Firms	1,211	1,078	1,212	1,211	1,078	1,212
Hansen (p-value)	0.15	0.45	0.30	0.16	0.42	0.23
AR2 (p-value)	0.76	0.54	0.39	0.80	0.56	0.40

Robust standard errors in parentheses. Constant and time dummy variables are included in the regressions but not reported.

* significant at 10% ** significant at 5%, *** significant at 1%.

ROE, is defined as EBIT divided by book value of shareholders' equity. *ROS*, is defined as total turnover divided by book value of shareholders' equity. *Tobin's Q* is the market value of firm divided by book value of the firm's assets. *Board size* is the total number of directors on the board. *Share NE* is the percentage of non-executive directors on the board. *Lagged Leverage* is the ratio of long term debt to total assets lagged one year. *Lagged Size* is the natural log of number of employees lagged one year. *IE Presence* is a dummy variable which has the value of 1 if a non-executive director is also an executive director of another company and 0 if not. *Number of IE directors* is the number of non-executive directors on a board who are executive directors in other companies.